

Appl. No. 10/696,235
Amdt. Dated August 30, 2005
Reply to Office Action of April 7, 2005

Amendments to the Specification:

Please amend paragraphs [01], [02], [03], [04] and [05] of the specification as follows:

[01] The present application is related to commonly owned (and filed on even date) United States Patent Applications: (1) United States Patent Application Serial No. ~~(Attorney Docket No. 08831-0062)~~ Publication No. 2005/0088385 ("the 385 application"), entitled "SYSTEM AND METHOD FOR PERFORMING IMAGE RECONSTRUCTION AND SUBPIXEL RENDERING TO EFFECT SCALING FOR MULTI-MODE DISPLAY", which is hereby incorporated herein by reference in its entirety.

[02] In commonly owned United States Patent Applications: (1) United States Patent Application Serial No. ~~09/046,232 ("the '232 application")~~ Publication No. 2002/0015110 ("the '110 application"), entitled "ARRANGEMENT OF COLOR PIXELS FOR FULL COLOR IMAGING DEVICES WITH SIMPLIFIED ADDRESSING," filed July 25, 2001; (2) United States Patent Application Serial No. ~~10/278,353 ("the '353 application")~~ Publication No. 2003/0128225 ("the '225 application"), entitled "IMPROVEMENTS TO COLOR FLAT PANEL DISPLAY SUB-PIXEL ARRANGEMENTS AND LAYOUTS FOR SUB-PIXEL RENDERING WITH INCREASED MODULATION TRANSFER FUNCTION RESPONSE," filed October 22, 2002; (3) United States Patent Application Serial No. ~~10/278,352 ("the '352 application")~~ Publication No. 2003/0128179 ("the '179 application"), entitled "IMPROVEMENTS TO COLOR FLAT PANEL DISPLAY

Appl. No. 10/696,235
Amdt. Dated August 30, 2005
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SUB-PIXEL ARRANGEMENTS AND LAYOUTS FOR SUB-PIXEL RENDERING WITH SPLIT BLUE SUB-PIXELS," filed October 22, 2002; (4) United States Patent Application ~~Serial No. 10/243,094 ("the '094 application")~~ Publication No. 2004/0051724 ("the '724 application"), entitled "IMPROVED FOUR COLOR ARRANGEMENTS AND EMITTERS FOR SUB-PIXEL RENDERING," filed September 13, 2002; (5) United States Patent Application ~~Serial No. 10/278,328 ("the '328 application")~~ Publication No. 2003/0117423 ("the '423 application"), entitled "IMPROVEMENTS TO COLOR FLAT PANEL DISPLAY SUB-PIXEL ARRANGEMENTS AND LAYOUTS WITH REDUCED BLUE LUMINANCE WELL VISIBILITY," filed October 22, 2002; (6) United States Patent Application ~~Serial No. 10/278,393 ("the '393 application")~~ Publication No. 2003/0090581 ("the '581 application"), entitled "COLOR DISPLAY HAVING HORIZONTAL SUB-PIXEL ARRANGEMENTS AND LAYOUTS," filed October 22, 2002; (7) United States Patent Application ~~Serial No. 01/347,001 ("the '001 application")~~ Publication No. 2004/0080479 ("the '479 application"), entitled "IMPROVED SUB-PIXEL ARRANGEMENTS FOR STRIPED DISPLAYS AND METHODS AND SYSTEMS FOR SUB-PIXEL RENDERING SAME," filed January 16, 2003, each of which is herein incorporated by reference in its entirety, novel sub-pixel arrangements are therein disclosed for improving the cost/performance curves for image display devices.

[03] For certain subpixel repeating groups having an even number of subpixels in a horizontal direction, the following systems and techniques to affect proper dot inversion schemes are disclosed and are herein incorporated by reference in their entirety: (1) United States Patent Application ~~Serial Number 10/456,839~~ Publication No.

Appl. No. 10/696,235
Amdt. Dated August 30, 2005
Reply to Office Action of April 7, 2005

2004/0246280 ("the '280 application), entitled "IMAGE DEGRADATION CORRECTION IN NOVEL LIQUID CRYSTAL DISPLAYS"; (2) United States Patent Application Serial-
~~No. 10/455,925~~ Publication No. 2004/0246213 ("the '213 application), entitled
"DISPLAY PANEL HAVING CROSSOVER CONNECTIONS EFFECTING DOT
INVERSION"; (3) United States Patent Application Serial-~~No. 10/455,931~~ Publication
No. 2004/0246381 "the '381 application), entitled "SYSTEM AND METHOD OF
PERFORMING DOT INVERSION WITH STANDARD DRIVERS AND BACKPLANE ON
NOVEL DISPLAY PANEL LAYOUTS"; (4) United States Patent Application Serial-~~No.~~
~~10/455,927~~ Publication No. 2004/0246278 ("the '278 application), entitled "SYSTEM
AND METHOD FOR COMPENSATING FOR VISUAL EFFECTS UPON PANELS
HAVING FIXED PATTERN NOISE WITH REDUCED QUANTIZATION ERROR"; (5)
United States Patent Application Serial-~~No. 10/456,806~~ Publication No. 2004/0246279
("the '279 application), entitled "DOT INVERSION ON NOVEL DISPLAY PANEL
LAYOUTS WITH EXTRA DRIVERS"; (6) United States Patent Application Serial-~~No.~~
~~10/456,838~~ Publication No. 2004/0246404 ("the '404 application), entitled "LIQUID
CRYSTAL DISPLAY BACKPLANE LAYOUTS AND ADDRESSING FOR NON-
STANDARD SUBPIXEL ARRANGEMENTS"; and (7) United States Patent Application
Serial-~~No. (Attorney Docket No. 08831.0056.01)~~ Publication No. 2005/0083277 ("the
'277 application), entitled "IMAGE DEGRADATION CORRECTION IN NOVEL LIQUID
CRYSTAL DISPLAYS WITH SPLIT BLUE SUBPIXELS".

[04] These improvements are particularly pronounced when coupled with sub-
pixel rendering (SPR) systems and methods further disclosed in those applications and

Appl. No. 10/696,235
Amdt. Dated August 30, 2005
Reply to Office Action of April 7, 2005

in commonly owned United States Patent Applications: (1) United States Patent Application ~~Serial No. 10/051,612~~ (~~"the '612 application"~~) Publication No. 2003/0034992 (~~"the '992 application"~~), entitled "CONVERSION OF RGB A SUB-PIXEL FORMAT DATA TO ~~PENTILE MATRIX~~ ANOTHER SUB-PIXEL DATA FORMAT," filed January 16, 2002; (2) United States Patent Application ~~Serial No. 10/150,355~~ (~~"the '355 application"~~) Publication No. 2003/0103058 (~~"the '058 application"~~), entitled "METHODS AND SYSTEMS FOR SUB-PIXEL RENDERING WITH GAMMA ADJUSTMENT," filed May 17, 2002; (3) United States Patent Application ~~Serial No. 10/215,843~~ (~~"the '843 application"~~) Publication No. 2003/0085906 (~~"the '906 application"~~), entitled "METHODS AND SYSTEMS FOR SUB-PIXEL RENDERING WITH ADAPTIVE FILTERING," filed August 8, 2002; (4) United States Patent Application ~~Serial No. 10/379,767~~ Publication No. 2004/0196302 (~~"the '302 application"~~), entitled "SYSTEMS AND METHODS FOR TEMPORAL SUB-PIXEL RENDERING OF IMAGE DATA" filed March 4, 2003; (5) United States Patent Application ~~Serial No. 10/379,765~~ Publication No. 2004/0174380 (~~"the '380 application"~~), entitled "SYSTEMS AND METHODS FOR MOTION ADAPTIVE FILTERING," filed March 4, 2003; (6) United States Patent Application ~~Serial No. 10/379,766~~ Publication No. 2004/0174375 (~~"the '375 application"~~), entitled "SUB-PIXEL RENDERING SYSTEM AND METHOD FOR IMPROVED DISPLAY VIEWING ANGLES" filed March 4, 2003; (7) United States Patent Application ~~Serial No. 10/409,413~~ Publication No. 2004/0196297 (~~"the '297 application"~~), entitled "IMAGE DATA SET WITH EMBEDDED PRE-SUBPIXEL RENDERED IMAGE" filed April 7, 2003, which are hereby incorporated herein by reference in their entirety.

Appl. No. 10/696,235
Amdt. Dated August 30, 2005
Reply to Office Action of April 7, 2005

[05] Improvements in gamut conversion and mapping are disclosed in commonly owned and co-pending United States Patent Applications: (1) United States Patent Application Serial No. ~~Attorney Docket No. 08831.0057~~ Publication No. 2005/0083345 ("the '345 application"), entitled "HUE ANGLE CALCULATION SYSTEM AND METHODS", filed October 21, 2003; (2) United States Patent Application Serial No. ~~(Attorney Docket No. 08831.0058)~~ Publication No. 2005/0083341 ("the '341 application"), entitled "METHOD AND APPARATUS FOR CONVERTING FROM SOURCE COLOR SPACE TO RGBW TARGET COLOR SPACE", filed October 21, 2003; (3) United States Patent Application Serial No. ~~(Attorney Docket No. 08831.0059)~~ Publication No. 2005/0083352 ("the '352 application"), entitled "METHOD AND APPARATUS FOR CONVERTING FROM A SOURCE COLOR SPACE TO A TARGET COLOR SPACE", filed October 21, 2003; and (4) United States Patent Application Serial No. ~~(Attorney Docket No. 08831.0061)~~ Publication No. 2005/0083344 ("the '344 application"), entitled "GAMUT CONVERSION SYSTEM AND METHODS", filed October 21, 2003, which are hereby incorporated herein by reference in their entirety. All patent applications mentioned in this specification are hereby incorporated by reference.

Please amend the Abstract as follows:

Systems and methods are disclosed herein given to effect a multiple mode display system that may accept multiple input image data formats and output several possible image data format. In a first embodiment, an image processing system

Appl. No. 10/696,235
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comprises: an input that receives a plurality of source image data, said plurality of source image data further comprising a plurality of source image data formats; circuitry that resamples source image data from said source image data format to a plurality of target image data formats; and a display that renders target image data wherein the resolution of the display comprises approximately one half resolution of the largest of said plurality of target image data formats.